

**[0046]**

**ABSTRACT OF THE DISCLOSURE**

**[0047]**

A high speed transmission system transfers data streams over a plurality of data links. Each data link may carry a number of bit streams. On the transmitting end, multiplexers serialize the bit streams, which are then transmitted to the receiving end. A clock signal is not transmitted over the optical link. Instead, an indication of the appropriate clock signal frequency and phase is embedded in the transmitted data. At the receiving end, a clock recovery circuit generates a clock signal of an appropriate frequency and phase based on the embedded indication. The new clock signal is used to sample and reconstruct the original data streams.